AA-7633
Administrative Special Permit

Demolish the detached garage.

Mr. David O'Neil
and Ms. Laura Billings
5904 Cedar Parkway

CHEVY CHASE VILLAGE
ESTABLISHED 1890

December 2, 2019

Mr. David O'Neil
And Ms. Laura Billings
5904 Cedar Parkway
Chevy Chase, MD 2081

Dear Mr. O'Neil and Ms. Laura Billings:

Please note that your request for an administrative Special Permit to demolish the detached garage on your property is being reviewed by the Building Officer and Village Manager.

A public notice was mailed to abutting and confronting property owners on the 18th day of November, 2019 and a sign was posted at the property. Abutting or confronting property owners or any aggrieved resident, within fifteen (15) days of the date the notices are issued, may submit written comments and request that the application be submitted to the Board of Managers in accordance with Section 8-10 of the Chevy Chase Village Building Code.

For your convenience, enclosed please find copies of the Public Notice and mailing list. Please contact the Village office if you have any questions.

Sincerely,

Jessica Gebhart
Permitting and Code Enforcement
Chevy Chase Village

enclosures

CHEVY CHASE VILLAGE
5906 Connecticut Avenue
Chevy Chase, Maryland 20815
Phone (301) 654-7300
Fax (301) 907-9721
ccv@montgomerycountymd.gov
www.chevychasevillagemd.gov

CHEVY CHASE VILLAGE
NOTICE OF ADMINISTRATIVE SPECIAL PERMIT REQUEST

Please take notice that the Chevy Chase Village Building Officer and Village Manager will conduct an administrative review of a Special Permit application for the following:

APPEAL NUMBER AA-7633
MR. DAVID O'NEIL AND MS. LAURA BILLINGS
5904 CEDAR PARKWAY
CHEVY CHASE, MARYLAND 20815

The applicants seek an administrative Special Permit pursuant to Section 8-11 of the Chevy Chase Village Building Code to demolish the detached garage.

The Chevy Chase Village Code Sec. 8-18 states:

> Any person intending to demolish, raze or tear down more than fifty (50) percent of the exterior features of an existing building, garage or accessory building within the Village must first obtain an administrative Special Permit pursuant to Sec. 8-11 for such demolition in order to ensure that such work will be carried out in such a manner that abutting property owners will not be adversely affected and that the interests of the Village in public health, safety and welfare are not jeopardized by such work.

Additional information regarding this case may be obtained at the Chevy Chase Village Office between the hours of 9:00 a.m. and 5:00 p.m. Monday through Friday, may be viewed on the Village website at www.chevychasevillagemd.gov or you may contact the office for this information to be mailed to you.

This notice was mailed (and emailed where possible) to abutting property owners on the 2nd day of December, 2019. Abutting or confronting property owners or any aggrieved resident may, within fifteen (15) days of the date the notices are issued, submit written comments and request that the application be submitted to the Board of Managers in accordance with Section 8-10 of the Chevy Chase Village Building Code.

Chevy Chase Village Office
5906 Connecticut Avenue
Chevy Chase, Maryland 20815
301-654-7300

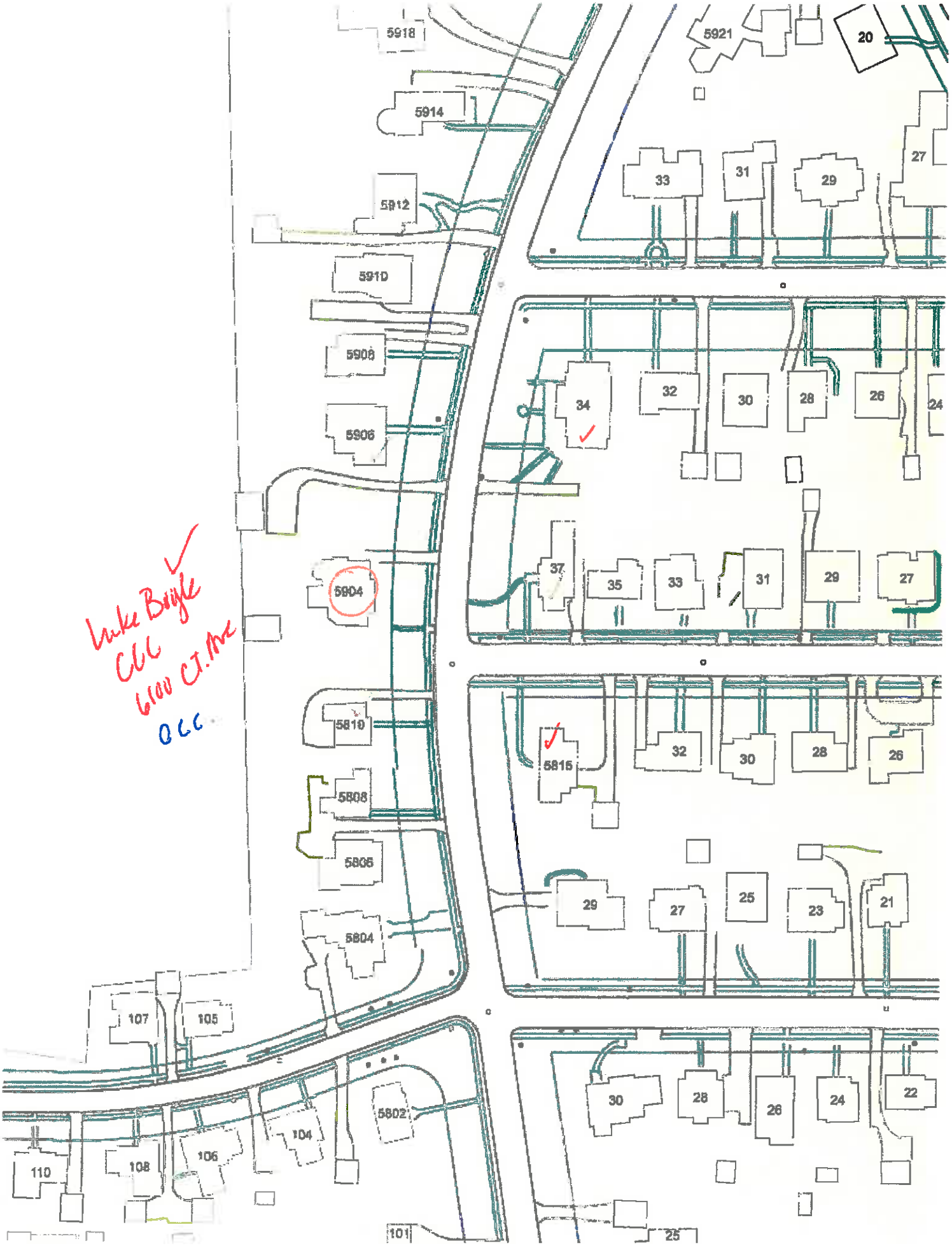
MAILING LIST FOR APPEAL AA-7633

MS. LAURA BILLINGS
& MR. DAVID O'NEIL
5904 CEDAR PARKWAY
CHEVY CHASE, MD 20815

Adjoining and confronting property owners	
Mr. & Mrs. John D. Talbott Or Current Resident 5906 Cedar Parkway Chevy Chase, MD 20815	Mr. & Mrs. Peter W. Asmuth Or Current Resident 5810 Cedar Parkway Chevy Chase, MD 20815
Mr. & Mrs. Tom Dann Or Current Resident 34 W. Kirke Street Chevy Chase, MD 20815	Mr. David Holzworth & Mrs. Roslyn Mazer Or Current Occupant 37 W. Irving Street Chevy Chase, MD 20815
Mr. & Mrs. Martin Weinstein Or Current Resident 5815 Cedar Parkway Chevy Chase, MD 20815	Chevy Chase Club 6100 Connecticut Avenue Chevy Chase, MD 20815

I hereby certify that a public notice was mailed, and emailed where possible, to the aforementioned property owners on the 2nd day of December 2019.

Jessica Gebhart
Permitting and Code Enforcement Coordinator
Chevy Chase Village
5906 Connecticut Avenue
Chevy Chase, MD 20815



Luke Boyle
CCC
6100 CT. Ave
OCC

Online Form Submittal: Special Permit or Variance Extension Request

noreply@civicplus.com
Mon 11/11/2019 03:13 PM

To: Village, Chevy Chase <ChevyChase.Village@montgomerycountymd.gov>; CCV Permitting <ccvpermitting@montgomerycountymd.gov>

[EXTERNAL EMAIL]

Special Permit or Variance Extension Request

Step 1

Previously Granted Permit No.	*Field not completed.*
Property Address	5904 Cedar Parkway
	(Section Break)
Resident Name:	Laura Billings and David O'neal
Daytime telephone:	*Field not completed.*
Cell Phone:	*Field not completed.*
After-hours telephone:	*Field not completed.*
E-mail Address	laura_m_billings@yahoo.com; dave0505@gmail.com
	(Section Break)
Project Description:	demolition of a detached garage
	(Section Break)
Primary Contact for Project	Contractor*
Office Telephone	301-652-4200
After-hours Telephone:	*Field not completed.*
Email Address	michael@banksdevco.com
	(Section Break)
Filing Requirements:	Completed Chevy Chase Village Application for a Special Permit or Variance Extension (this form).
	(Section Break)

Affidavit

I hereby certify that I have the authority to submit the foregoing application, that all owners of the property have signed below, that I have read and understand all requirements and that I or an authorized representative will appear at the scheduled public hearing in this matter. I hereby authorize the Village Manager, or the Manager's designee, and/or the Board of Managers to enter onto the subject property for the purposes of assessing the site in relation to this extension request. I hereby declare and affirm, under penalty of perjury, that all matters and facts set forth in the foregoing application are true and correct to the best of my knowledge, information and belief.

Electronic Signature Agreement	I agree.
Applicant's Signature	Laura Billings
Date	11/11/2019

Step 2

Sec. 8-10(f) Extension: The Village Manager may extend any time limit imposed as a condition of a Special Permit or variance upon a reasonable showing that there has been no material change in circumstance since the special permit or variance was granted and, despite due diligence by the permittee, additional time is necessary to accomplish the approved construction.

Has there been any material change in circumstance since the Special Permit or variance was granted:	no
Describe the basis for the extension request including specifically which elements of the project remain incomplete (attach additional pages as needed):	n/a
Approximately how much additional time do you anticipate you will need to complete the remaining work?	1 week
File Upload	CCV Garage Demo Packet.pdf

Describe the basis for the Special Permit (Applicants should become familiar with the pertinent sections of the Village Code. Attach additional pages as needed):

Describe the reasons why approval of the Special Permit would not adversely affect the public health, safety or welfare or the reasonable use of adjoining properties:

Completed Online

Describe the reasons why the Special Permit can be granted without substantial impairment of the intent and purpose of Chapter 8 or Chapter 25 of the Chevy Chase Village Code:

Completed Online.

In exercising its powers in connection with an administrative special permit request, the Chevy Chase Village Building Officer and the Village Manager may reverse or affirm, wholly or partly, or may modify the requirement, decision or determination as it deems appropriate.

Special Permit Filing Fees	**Checks Payable To:** **Chevy Chase Village 5906 Connecticut Ave. Chevy Chase, MD 20815**
Per Village Code Sec. 6-2(a)(24) ☐ $300.00 for new construction. ☐ $150.00 for replacing existing non-conformities. ☐ $2,250.00 for demolition of main building. ☒ $300.00 for demolition of accessory building or structure. ☐ $300.00 for fences, walls, play equipment, trees, hedges, shrubbery in the public right-of-way. **Fee Paid:** $300.00	**Date Paid:** 11/15/19 Check # 17835 **Staff Signature:**
	Approved to Issue Building Permit per Decision Signed by the Building Officer and Village Manager on: **Date:** _____ **Signature:** _____ **Building Officer** **Signature:** _____ **Village Manager**

Online Form Submittal: Building Permit Application

noreply@civicplus.com
Thu 11/14/2019 07:14 AM
To: Phillip D. Long <phil@cas-dc.com>

Building Permit Application

Step 1

Property Address:	5904 Cedar Parkway
Name	Laura Billings and David O'Neil
Email Address	laura_m_billings@yahoo.com; dave0505@gmail.com
Phone Number	9173590949
Cell Number	*Field not completed.*
After-hours Phone Number	*Field not completed.*
Project Description:	demolition of a detached garage
Check below if the construction will require the demolition of over fifty (50) percent of any existing structure.	Yes
Primary Contact for Project:	Contractor*
*MHIC/MD Contractor's License No.	BC2693

(Section Break)

Information for Primary Contact for Project (if different from property owner):

Name	Michael Banks
Email Address	michael@banksdevco.com
Work Telephone	301-652-4200
Cell Number	2023699558
After-hours Telephone	*Field not completed.*

(Section Break)

Will the residence be occupied during the construction project?	No
Name	*Field not completed.*
Email Address	*Field not completed.*
Address	*Field not completed.*
Work Telephone	*Field not completed.*
Cell Number	*Field not completed.*
After-hours Telephone	*Field not completed.*

(Section Break)

Is adequate on-site parking available for the construction crews?	Yes
File Upload	*Field not completed.*
Will road closing be required due to deliveries, equipment or other reasons?	No

Step 2

Building Permit Filing Requirements:	*Field not completed.*
File Upload	*Field not completed.*

Once this permit application is complete, the Village Manager will review the application and accompanying documents and, under most circumstances, act on the application within 5 to 10 working days.

If the Montgomery County permit is suspended, revoked or lapsed, the Village permit is automatically suspended, revoked or lapsed.

No signs advertising the architect, contractor, or any other service provider may be posted on the work site.

I hereby certify that I have the authority to make the foregoing application, that the application is correct, that I have read and understood all requirements and that the construction will conform to the regulations of the Montgomery County Zoning Code, the Village Code including Urban Forest code, and any covenants and easements on the subject property.

I agree.

Electronic Signature
Agreement

Electronic Signature	Laura Billings and David O'Neil
Date:	11/14/2019

Step 3

NO PMT $30.00

For Use By Village Manager	Application approved with the following conditions:

For Use By Village Manager	Application denied for the following reasons:
DENIED NOV 18 2019 Chevy Chase Village Manager	

Filing Fees (due when application submitted)	**Checks Payable to:** **Chevy Chase Village** **5906 Connecticut Ave.** **Chevy Chase, MD 20815**
Permit Application Fee: $ 30.00 (see Permit Fee Worksheet) ☐ $50.00 (if construction is in the Public Right-of-way)	
Tree Preservation Plan Fee: ☐ $250.00 Already in Place ☐ Not required for this project.	
TOTAL Fees: $30.00	Date: 11/15/19 Staff Signature:

Damage Deposit/Performance Bond (due when permit is issued)	**Checks Payable to:** **Chevy Chase Village** **5906 Connecticut Ave.** **Chevy Chase, MD 20815**
☐ $_____ ☐ Waived by Village Manager	Date: Village Manager Signature:
Cost of damage to R-O-W: (calculated at close-out) Amount of refund:	Date: Village Manager Signature:

DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Hadi Mansouri
Acting Director

DEMOLITION / MOVE PERMIT

Issue Date: 11/27/2019

Permit No: 896988
Expires: 11/27/2020
X Ref.:
Rev. No:
ID: 1360261

THIS IS TO CERTIFY THAT: David O'Neil Laura Billings
5904 Cedar Parkway
CHEVY CHASE, MD 20815

HAS PERMISSION TO: DEMOLISH GARAGE

PERMIT CONDITIONS:

PREMISE ADDRESS: 5904 CEDAR PKWY
CHEVY CHASE, MD 20815

If the premise contains asbestos, permit holder is advised that state regulations require its removal prior to demolition and that the Maryland Department of the Environment be notified prior to demolition. For more information, call 1-800-633-6101.

LOT - BLOCK: N/A - N/A ZONE: ELECTION DISTRICT: 07

BOND NO.: PS20A108404 BOND TYPE: CASH PS NUMBER: 108404

PERMIT FEE: $ 156.82 SUBDIVISION: CHEVY CHASE SEC 2

The permit fee is calculated based on the approved Executive Regulations multiplied by the Enterprise Fund Stabilization Factor for current fiscal year.

MUST BE POSTED ON JOB SITE

Hadi M Mansouri
Acting Director, Department of Permitting Services

File Copy

5904 Cedar

LAND SURVEYS TOPOGRAPHIC SUBDIVISIONS CONSTRUCTION SURVEYS LOAN SURVEYS CONSULTANT

American Topographic Engineers

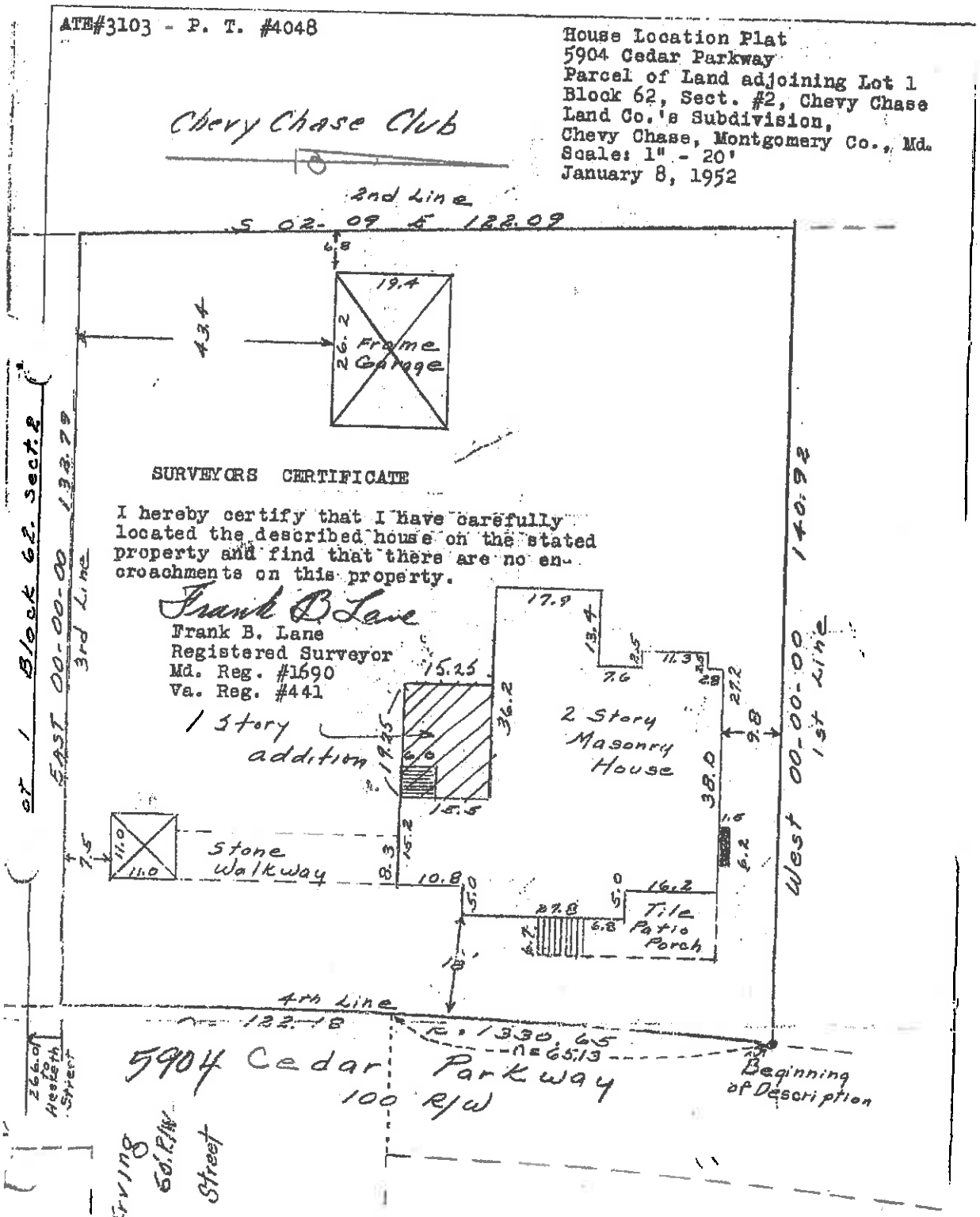
Registered Maryland-Virginia

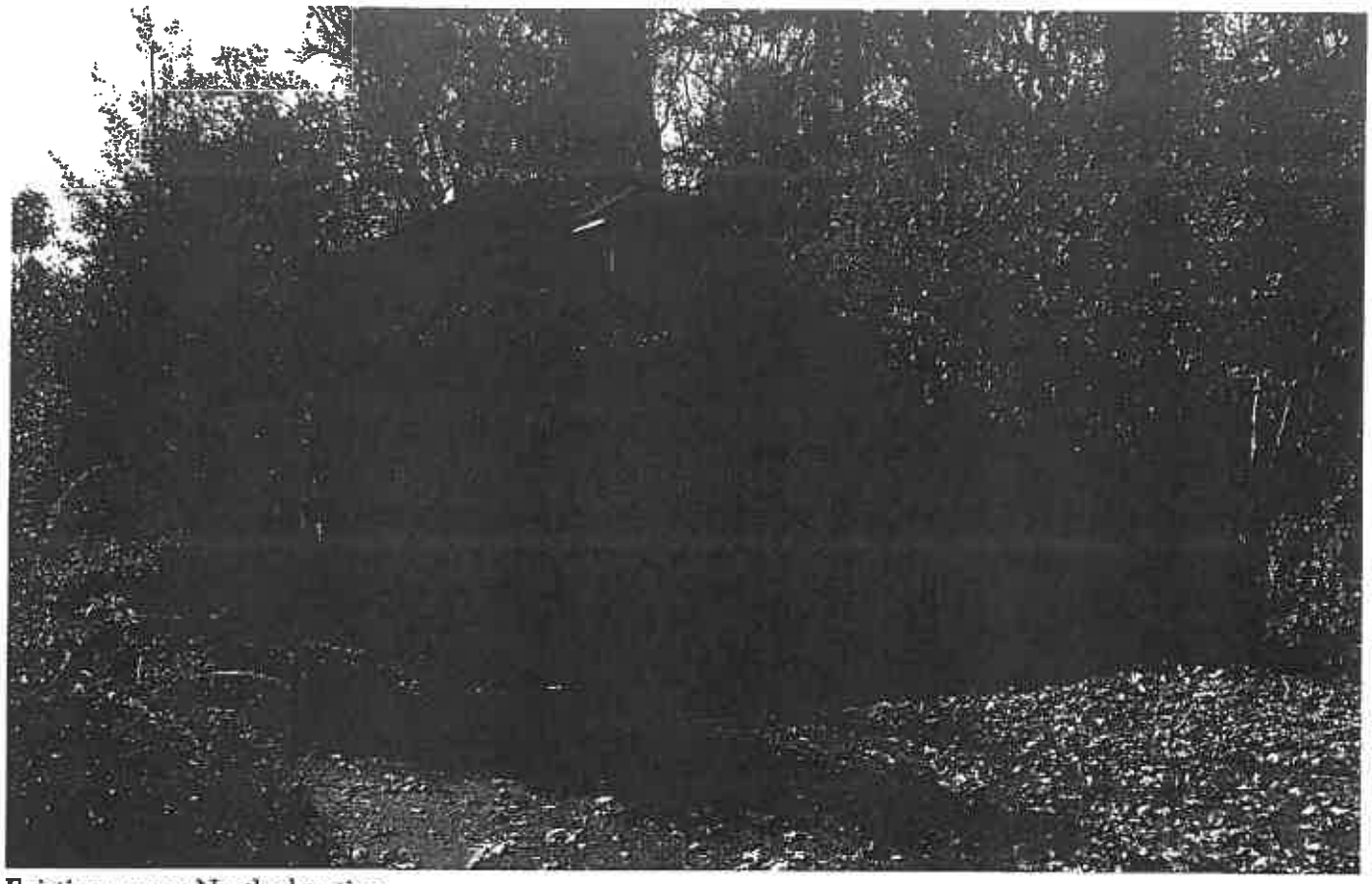
7136 WISCONSIN AVENUE
BETHESDA 14, MARYLAND

WISCONSIN 8978

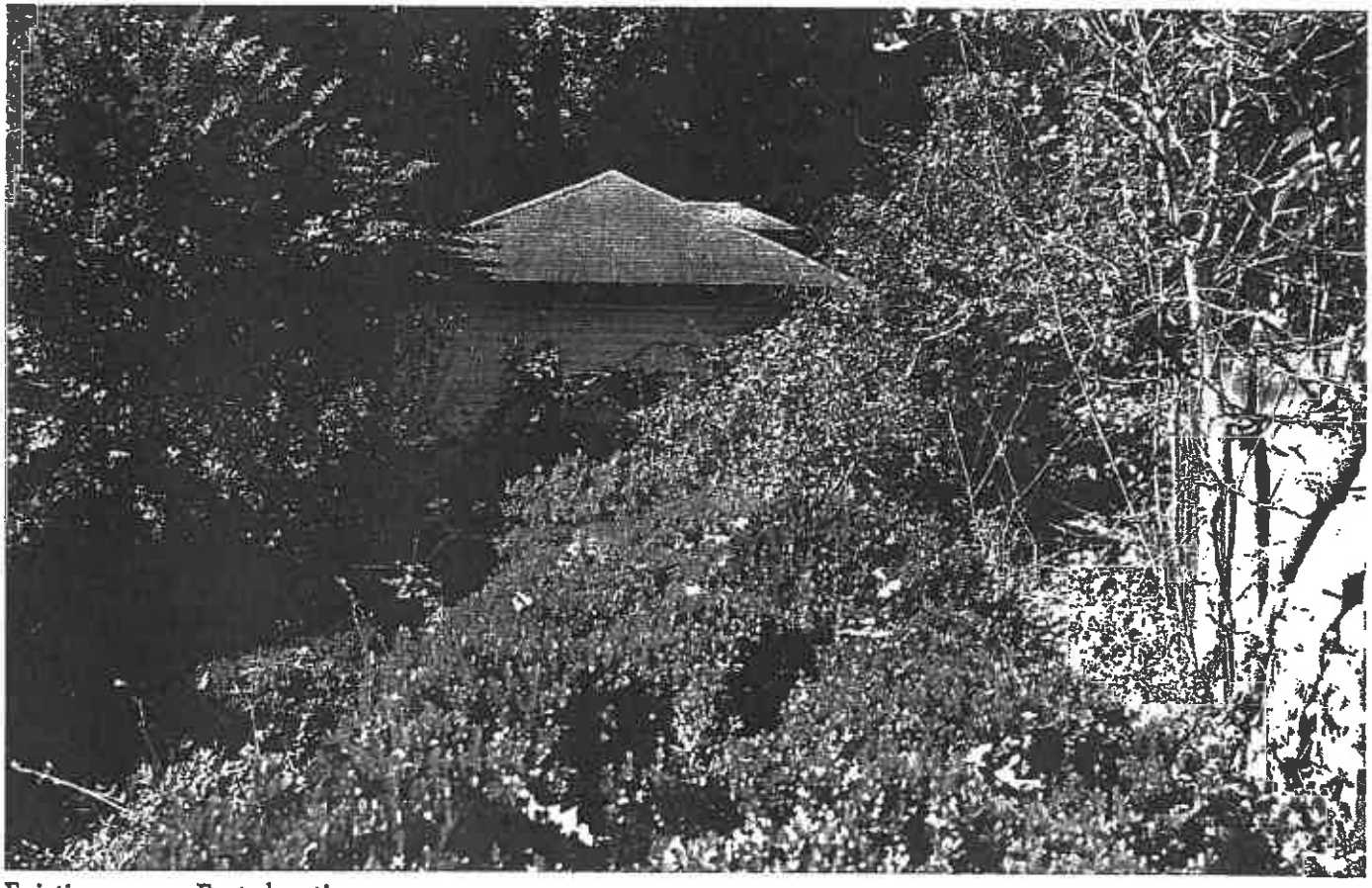
ATE#3103 - P. T. #4048

House Location Plat
5904 Cedar Parkway
Parcel of Land adjoining Lot 1
Block 62, Sect. #2, Chevy Chase
Land Co.'s Subdivision,
Chevy Chase, Montgomery Co., Md.
Scale: 1" - 20'
January 8, 1952

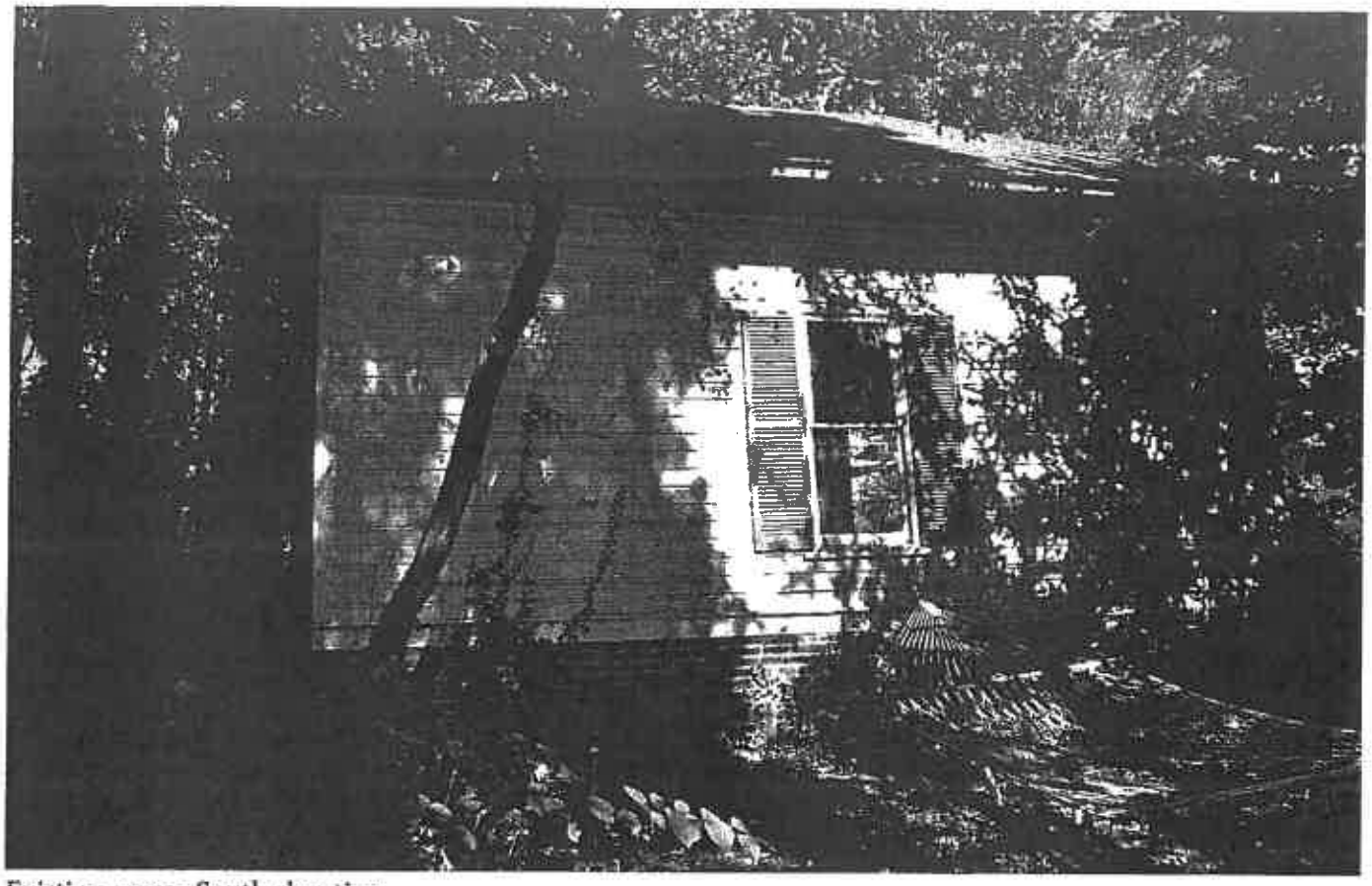




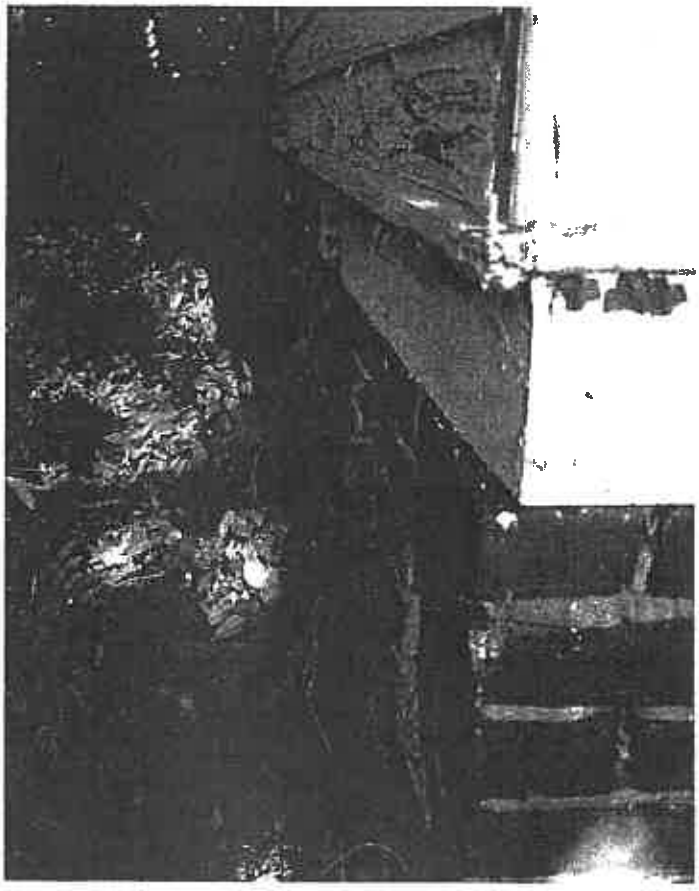
Existing garage North elevation



Existing garage East elevation



Existing garage South elevation



Existing garage foundation

BANKS
DEVELOPMENT CO.

October 31, 2019

Banks Development Co
4811 St. Elmo Avenue
Bethesda, Maryland 20814

ChevyChaseVillage
5906 Connecticut Avenue
Chevy Chase, Maryland 20815

RE: Demolition of existing detached garage at:
5904 Cedar Parkway Chevy Chase, MD 20815

This letter is to attest and confirm that the demolition and removal of construction materials and debris will at all times be done in accordance with all applicable Chevy Chase Village and Montgomery County codes and ordinances, as well as in accordance with the requirements of any and all permits, including demolition permits and Historic Area Work Permits issued in conjunction with said work.

The demolition will require 2-3 working days.

Prior to commencing demolition, we will ensure that the site has all sediment controls in place, including tree protection.

Prior to commencing demolition, the detached garage will be hosed/watered down in order to minimize any dust resulting from the raze.

Deconstruction will be first done by hand. Reusable house parts will be set aside for pick up by Second Chance. The remaining parts and concrete will be razed by a bobcat and will be hauled away with dumpsters. We will hose down building parts as we work to ensure little dust.

The demolition of the existing detached garage at 5904 Cedar Parkway Chevy Chase, MD 20815 should not affect the health, safety or welfare or the reasonable use of adjoining properties.

The granting of the Special Permit will not impair the Intent or purpose of Chapter 8 of the Chevy Chase Village code.

Sincerely,
michael banks
Michael Banks
President
Banks Development Co.

LIMITED ASBESTOS-CONTAINING MATERIALS SURVEY

Conducted at:

5904 CEDAR PARKWAY
Chevy Chase, Maryland 20815

Prepared for:

BANKS DEVELOPMENT
4811 St Elmo Avenue
Bethesda, Maryland 20814

Attention: Mr. Bill Cole
Project Manager

BEC Project # MD19185

Fieldwork Conducted: September 5, 2019

Final Technical Report Date: September 17, 2019

Prepared by:

BOGGS ENVIRONMENTAL CONSULTANTS
Middletown, MD ~ Morgantown, WV
Corporate Office: 200 W Main Street, Middletown, MD 21769
Tel: (301) 694-5687 ~ Fax: (301) 694-9799

ENVIRONMENTAL SCIENCE, ENGINEERING & INDUSTRIAL HYGIENE SERVICES

BOGGS

LIMITED ASBESTOS-CONTAINING MATERIALS SURVEY

Conducted at:

5904 CEDAR PARKWAY

Chevy Chase, Maryland 20815

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BOGGS ENVIRONMENTAL CONSULTANTS, INC.

On-site Fieldwork & Final Technical Report By:

Andrew L. Hanson
Project Manager
US EPA AHERA Inspector Certification (#18-734)
State of Maryland Asbestos Inspector (License No. 19008182)

SECTION 1.0 SUBJECT SITE DESCRIPTION & SCOPE OF WORK

Project Site:	**5904 Cedar Parkway** Chevy Chase, Maryland 20815
Requester Name:	Bill Cole Project Manager
Requestor Address:	**BANKS DEVELOPMENT** 4811 St Elmo Avenue Bethesda, Maryland 20814

Subject Site Description & Scope of Work:

The focus of this inspection was the readily-accessible suspect asbestos containing material associated with the garage structure located at 5904 Cedar Parkway, Chevy Chase, Maryland 20815.

BEC received authorization from Mr. Bill Cole, Project Manager with Banks Development to conduct the asbestos-containing building construction materials (ACBMs) survey at the garage on September 5, 2019. Mr. Close requested the asbestos survey to determine applicability (and impact) of **(i)** United States (US) Environmental Protection Agency (EPA)/ **(ii)** State of Maryland, Department of the Environment (MDE) environmental pollution and **(iii)** State of Maryland Occupational Safety and Health (MOSH)/**(iv)** US Occupational Safety and Health Administration (US OSHA) worker protection regulations to the planned renovation (construction) work activities. It is relevant to note, both the Federal and State regulations apply to work which will, or can be reasonably anticipated to, result in disturbance of ACBMs. BEC advises this asbestos survey focused exclusively upon readily-visible/readily-accessible suspect ACBMs present at the garage structure. Therefore, BEC makes no references or representations regarding the presence or absence of ACBMs located at the subject site which were not part of this limited scope of work.

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.1 Background

BOGGS ENVIRONMENTAL CONSULTANTS, INC. (BEC) conducted an asbestos-containing building construction materials (ACBMs) survey at all accessible building areas of the garage located at 5904 Cedar Parkway, Chevy Chase, Maryland on September 5, 2019.

BEC conducted interviews with Mr. Cole, to become familiar with the building history, planned renovation project, and the limits of the ACBM survey, prior to proceeding with the field inspection.

BEC notes the asbestos survey did not involve exploratory demolition to access hidden (enclosed) construction conditions; only readily-accessible materials, all suspect ACBMs observed at the interior of the structure underwent visual inspection and representative bulk sampling during the course of the ACBMs survey.

2.2 Field Sampling

BEC staff member, Andrew L. Hanson, conducted a preliminary field walk inspection for the purpose of developing an inventory of suspect ACBMs. Subsequently, Mr. Hanson randomly collected multiple bulk samples of suspect ACBMs observed at the subject site on September 5, 2019.

Mr. Hanson possesses both a current training certification for the US EPA-approved instructional course entitled "Asbestos Building Inspector" and valid license for same, as issued by MDE.

2.2 Field Sampling (continued)

BEC advises, based upon current United States Environmental Protection Agency (US EPA) asbestos hazard control regulations, the minimum number of samples necessary to definitively determine the presence (or absence) of ACBMs is dependent on the nature and quantity of the suspect building construction material.

Additionally, the US EPA has established a standardized schedule for bulk sample collection of suspect ACBMs based upon homogeneous areas. Homogeneous areas are defined as "…building construction materials that are similar in color, consistency, texture, and appearance of similar application/installation time period".

Based upon onsite visual inspection and legally-enforceable US EPA bulk sampling protocols, collection of six (6) samples of suspect ACBMs was completed with all samples submitted to the analytical laboratory. The laboratory performed standard polarized light microscopy with dispersion staining (PLM/DS) analysis, which revealed the presence of nine (9) individual layers.

BEC advises, based upon the US EPA prescribed (mandatory) analytical method, the laboratory analyst has the sole discretion/responsibility in determining whether the bulk sample is composed of one or multiple layers.

2.3 Material Classification

Asbestos-containing building construction materials (ACBMs) are any building construction materials containing greater than one percent (>1%) asbestos. Friable means, whenever in a dry condition, the ACBM can be broken, crumbled or pulverized, and reduced to a powder form using simple hand pressure; conversely, non-friable ACBMs are materials incapable of reduction to powder via hand pressure.

In accordance with Federal asbestos hazard control regulations (40 CFR Part 763 - Asbestos, Subpart E), bulk sampling is not required to designate (i.e., presume and treat) a construction material suspected to contain asbestos as "presumed asbestos-containing material (PACM), should a duly trained and accredited asbestos inspector observe/inspect and assign the PACM designation to the suspect ACM.

However, BEC advises, in accordance with Federal regulations, rebuttal of the PACM designation and re-classification of a material to non-ACM, requires collection and analysis of a minimum number of samples of the suspect ACM.

As a reminder, a homogeneous material is a unique group of construction materials (eg, surfacing material, thermal system insulation material, or miscellaneous material) that possesses uniform properties such as color, texture, age, and functionality.

For a summary of the minimum number of samples required to undergo collection and analysis to rebut the PACM designation, please refer to **TABLE A: US EPA Minimum Number of Bulk Samples Required to Rebut ACM Designation** on the following page.

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.3 Material Classification (Continued)

TABLE A: US EPA Minimum Number of Bulk Samples Required to Rebut ACM Designation

Thermal System Insulation (TSI): Thermal System Insulation includes materials such as boiler insulation, pipe insulation, and ductwork insulation.		
At least three (3) samples from each homogeneous material of TSI.	At least one (1) sample from patched TSI that is less than six square feet.	For pipe fittings, in a manner sufficient to determine if the material is asbestos-containing.
Surfacing Material: Surfacing material includes materials such as spray-applied fireproofing, troweled-on plasters or ceiling textures.		
At least three samples from homogeneous materials of 1,000 square feet or less.	At least five samples from homogeneous materials of greater than 1,000 square feet but less than 5,000 square feet.	At least seven samples from homogeneous materials of greater than 5000 sf, with an additional 1 sample per each increment of 1,000 sf, in excess of 5,000 sf.
Miscellaneous Material and Non-friable Suspect ACM: Miscellaneous materials include all materials that are not *TSI* or *Surfacing Materials*, such as vinyl floor tile, acoustical ceiling tile. vinyl sheet goods (linoleum), roofing materials, *et cetera*.		
For each homogeneous material, a sufficient number are required to be collected and analyzed to determine if the material is ACM.	Samples are not required to be collected from homogeneous materials, of which the trained accredited asbestos inspector has determined to be non-asbestos-containing material, such as fiberglass or rubber.	

2.4 Laboratory Analysis

Pursuant to the visual inspection and bulk sample collection, BEC packaged and submitted the bulk samples to SanAir Technologies Laboratory (SanAir) of Powhatan, Virginia to undergo PLM/DS analysis to determine asbestos content analysis. A commercial courier delivery service vendor was used for shipment of the bulk samples. SanAir is fully accredited by the American Industrial Hygiene Association and the National Institute of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) as proficient in the analysis of asbestos in bulk samples.

SanAir performed PLM/DS analysis of all bulk samples, in accordance with the "*Test Method for the Determination of Asbestos in Bulk Building Materials*" (US EPA 600/R-93/116, July 1993). BEC advises PLM/DS analysis revealed the ACM bulk samples submitted to SanAir contained US EPA and US OSHA regulated asbestos concentrations. BEC provides the results of the PLM/DS analyses hereunder in **TABLE B: Asbestos-Containing Material Testing Results**:

TABLE B: Asbestos-Containing Material Testing Results

HA #	Sample #	Material Class	Sampling Location	Building Construction Material	Asbestos (%)
1	5904-1	Misc.	Garage Roof	Black Asphalt Roof Shingles	None Detected
				Associated Black Tar Paper	None Detected
1	5904-2	Misc.	Garage Roof	Black Asphalt Roof Shingles	None Detected
				Associated Black Tar Paper	None Detected
1	5904-3	Misc.	Garage Roof	Black Asphalt Roof Shingles	None Detected
				Associated Black Tar Paper	None Detected
2	5904-4	Misc.	Exterior Garage	Window Glazing Compound	None Detected
2	5904-5	Misc.	Exterior Garage	Window Glazing Compound	None Detected
2	5904-6	Misc.	Exterior Garage	Window Glazing Compound	**2% Chrysotile**

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.5 Asbestos Survey Limitations

The above inspection was characterized by making observations for suspect ACBMs and conducting bulk sampling of same, limited to only readily-accessible building areas. All accessible areas within the scope of work were inspected in accordance with US EPA regulations and generally accepted engineering work practices.

BEC asbestos survey sampling strategy included collection of multiple samples of the same materials chosen at random. However, BEC advises, due to the inconsistencies of manufacturer processes and contractor installation methods, materials of similar construction may have varied quantities of asbestos.

Furthermore, BEC advises locating all asbestos-containing materials present at a structure can only be definitively achieved by bulk sampling every section of pipe insulation, every fitting or valve covering, every square yard of fireproofing, and every square foot of other surface coating materials, for suspect materials both readily-accessible and hidden.

Therefore, BEC makes no warranty, expressed or implied, that all asbestos within the subject site has been found. Accordingly, BEC recommends bulk sampling and analysis of all suspect ACBMs (not otherwise evaluated during this survey) during work which will, or can be reasonably anticipated to, result in the disturbance or damage of same, prior to commencement and/or during demolition/renovation work.

SECTION 3.0 CONCLUSIONS & RECOMMENDATIONS

3.1 Conclusions

1. BEC concludes, based upon on-site visual inspection and review of analytical data, US EPA-regulated asbestos-containing materials **were identified** at the subject site and are listed hereunder in **TABLE C: Asbestos Containing Materials.**

TABLE C: Asbestos-Containing Materials

Building Construction Material	Material Location(s)	EPA Regulated	OSHA Regulated	Quantity*
Window Glazing Compound	Exterior Windows	YES	YES	~8 Windows

**BEC advises that these quantifications are solely estimations based on the square footage of the materials in question that was visibly observed within the subject site. Therefore, it is incumbent upon the general and/or asbestos abatement contractor to verify these quantities prior to the commencement of any demolition/renovation activities that may impact asbestos-containing materials within the subject site.*

2. BEC concludes, based upon review of US EPA and MDE law, specific regulations governing the disturbance, removal, and disposal of asbestos, **DO APPLY** to **ANY** planned work, of which will, or can be reasonably anticipated to, result in the disturbance of the building construction materials evaluated in the conduct of this asbestos survey.

3. BEC concludes, based upon review of US OSHA (Construction Industry: 29 CFR 1926.1101 and General Industry: 29 CFR 1910.1001) regulations governing non-occupational and occupational worker exposure to asbestos, **DO APPLY** to **ANY** renovation/demolition, housekeeping, maintenance, and/or repair activities directly and/or indirectly impacting (disturbance/damage) the building construction materials evaluated in the conduct of this asbestos survey.

SECTION 3.0 CONCLUSIONS & RECOMMENDATIONS

3.2 Recommendations

1. BEC recommends, in accordance with Federal and State of Maryland law, a licensed asbestos abatement contractor is retained to conduct the removal of any ACBMs or suspect asbestos-containing materials that would be disturbed by future planned renovation, construction, or demolition activities at the subject site.

2. In the event the client elects to abate any asbestos-containing materials identified at the subject site, BEC recommends a third-party Industrial Hygiene firm perform baseline, continuous, and post abatement air quality surveillance at the asbestos abatement work area(s) prior to permitting re-occupancy of the work area(s).

3. BEC recommends should any planned renovation activities result in the discovery of additional suspect ACBMs, halting all work activities with subsequent bulk sample collection and analysis of discovered ACBMs, to determine asbestos content.

   PLM/DS Limitations

   BEC advises all bulk samples were analyzed by Polarized Light Microscopy with Dispersion Staining (PLM/DS). This is a standard method of analysis in optical mineralogy and a suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The resultant characteristic color display enables mineral identification.

   Although PLM/DS analysis is the primary technique used for asbestos determination, it can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.

   As such, BEC recommends further evaluation via gravimetric reduction sample preparation technique and PLM/DS analysis with subsequent TEM analysis (10,000-20,000x magnification), should inconclusive PLM results persist, prior to designation as "non-asbestos-containing".

APPENDIX A

HOMOGENEOUS AREA PHOTO SHEET

Garage Structure at 5904 Cedar Parkway, Chevy Chase, Maryland 20815

HA #1: Black Asphalt Roof Shingles & Associated Tar Paper

HA #2: Window Glazing Compound

APPENDIX B

BEC BULK SAMPLING LOCATIONS

BEC

Boggs Environmental Consultants, Inc.

Date: 9-5-19

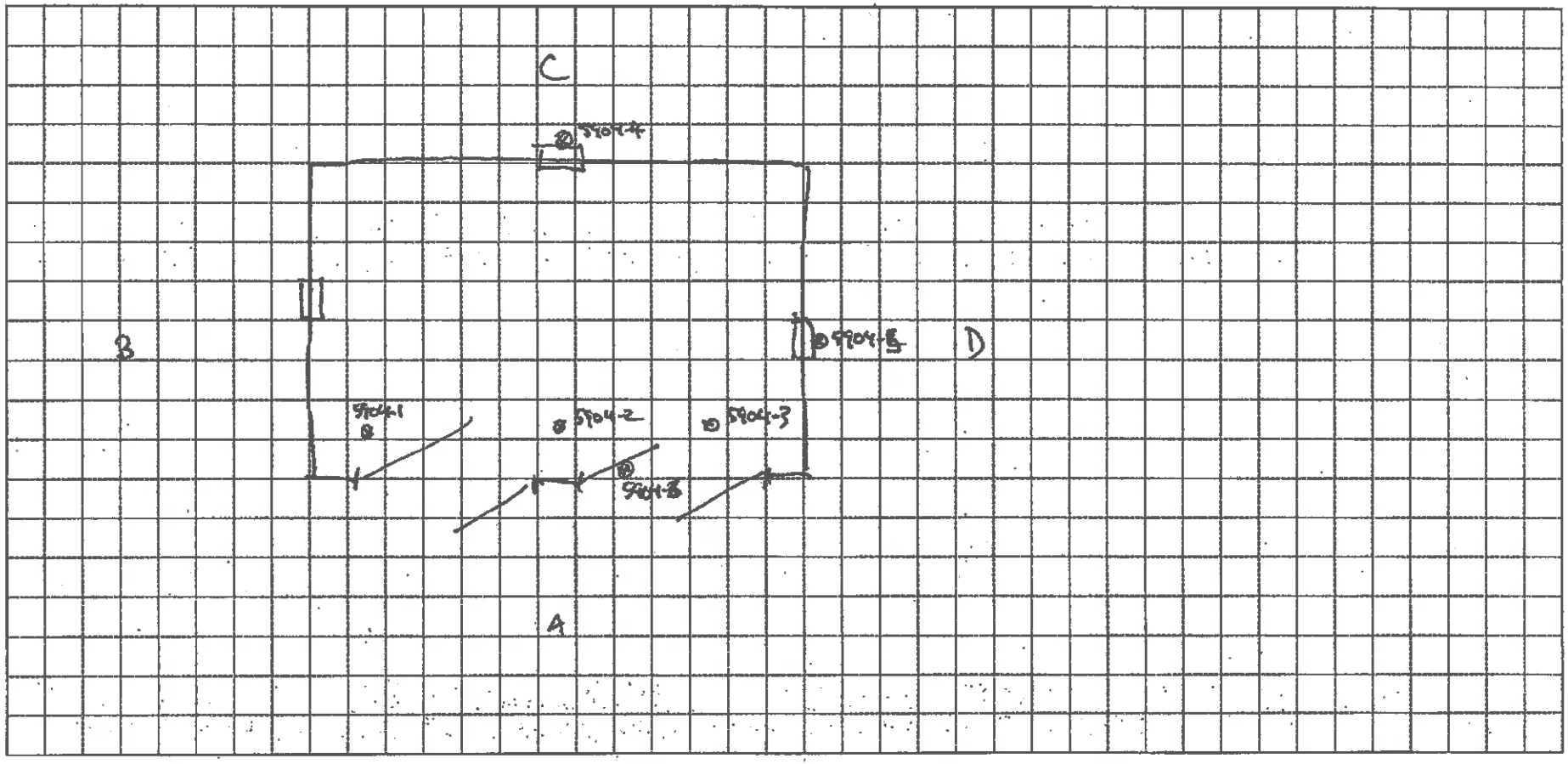
BEC Onsite IH: Andrew Hansen

Project Location: 5904 Cedar Pkwy Chevy Chase, MD

BEC Project No: MD19185

Project Manager: RR

SUBJECT SITE/ WORK AREA SKETCH

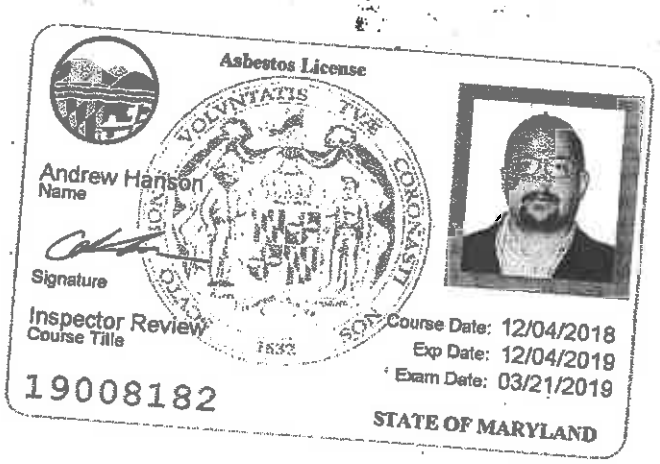


APPENDIX C

SANAIR LABORATORY ANALYTICAL RESULTS

&

CHAIN OF CUSTODY


Asbestos License
Andrew Hanson
Name
Signature
Inspector Review
Course Title
19008182
Course Date: 12/04/2018
Exp Date: 12/04/2019
Exam Date: 03/21/2019
STATE OF MARYLAND

LEAD-BASED PAINT INSPECTION
FINAL TECHNICAL REPORT

Conducted at:

5904 CEDAR PARKWAY
Chevy Chase, Maryland 20815

Prepared for:

BANKS DEVELOPMENT
4811 St Elmo Avenue
Bethesda, Maryland 20814

Attention: Mr. Bill Cole
Project Manager

BEC Project # MD19185

Fieldwork Conducted: September 5, 2019

Final Technical Report Date: September 17, 2019

Prepared by:

BOGGS
ENVIRONMENTAL CONSULTANTS

Middletown MD ~ Morgantown, WV
Corporate Office: 200 Main St., Middletown, MD 21769
Tel: (301) 694-5687 ~ Fax: (301) 694-9799

ENVIRONMENTAL SCIENCE, ENGINEERING & INDUSTRIAL HYGIENE SERVICES

BOGGS

LEAD-BASED PAINT INSPECTION
FINAL TECHNICAL REPORT

Conducted at:

5904 CEDAR PARKWAY

Chevy Chase, Maryland 20815

TABLE OF CONTENTS

BOGGS ENVIRONMENTAL CONSULTANTS, INC.

Final Technical Report & Onsite Fieldwork Conducted By:

Andrew Hanson., Project Manager
State of Maryland Lead Risk Assessor (#17343)

SECTION 1.0 SUBJECT SITE DESCRIPTION & SCOPE OF WORK

Project Site:	**5904 Cedar Parkway** Chevy Chase, Maryland 20815
Requester Name:	Bill Cole Project Manager
Requestor Address:	**BANKS DEVELOPMENT** 4811 St Elmo Avenue Bethesda, Maryland 20814

Subject Site Description & Scope of Work:

The subject site is a Garage on the property located at 5904 Cedar Parkway, Chevy Chase, Maryland 20815.

BEC received authorization from Mr. Bill Cole, Bank Development Project Manager, to provide support services to conduct the lead-based paint (LBP) inspection to identify building components for the presence of lead-based paint (LBP) and/or paint-containing lead (PCL). Mr. Cole requested the LBP inspection to determine applicability (and impact) of US EPA/US HUD/State of Maryland Department of the Environment (MDE) and US OSHA worker protection regulations potentially triggered during planned renovation (construction) work activities, which will, or can be reasonably anticipated to, result in disturbance of building components finished with LBP or PCL.

SECTION 2.0 LEAD-BASED PAINT INSPECTION

2.1 Background

BOGGS ENVIRONMENTAL CONSULTANTS, INC. (BEC) conducted the LBP inspection utilizing an US EPA/HUD/MDE accredited LBP inspector and all necessary sampling equipment to perform the LBP inspection, by evaluating the representative building components within each functional space located at the structure to gain an understanding of the locations of LBP and/or PCL within the subject site. The lead-based paint (LBP) inspection was conducted strictly adhering to the US HUD guidance document entitled "*Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*" , June 1995 (including the 1997 and 2012 revisions).

BEC staff member, Mr. Andrew Hanson, whom possesses valid United States Environmental Protection Agency (US EPA), US Housing and Urban Development (US HUD), MDE approved "Lead Risk Assessor" training certification conducted the inspection for LBP and/or PCL-finished building components on September 5, 2019.

2.2 LBP Inspection Procedures

The LBP inspection consisted of critical visual inspection and surface-by-surface investigation utilizing an X-Ray Fluorescence (XRF) *in situ* testing of paint films present at the structure. PROTEC "LPA-1" XRF manufactured by PROTEC Instrument Corporation, 38 Edge Hill Road, Waltham, Massachusetts. The PROTEC LPA-1 is a hand-held portable lead detector, designed to make accurate, non-destructive measurements of lead concentrations in paint. The LPA-1 (SN #1677) underwent resourcing of the Cobalt-57 radioactive isotope-based energy source on August 12, 2019. (See Appendix A - PROTEC "LPA-1" Radioactive Energy Resourcing Data).

SECTION 2.0 LEAD-BASED PAINT INSPECTION

2.2 LBP Inspection Procedures (continued)

The "LPA-1" is a hand-held portable lead detector, designed to make accurate, non-destructive measurements of lead concentrations in paint films, coatings, and/or finishes. BEC adhered to the XRF manufacturer's specifications and directives contained in the "*XRF Performance Characteristic Sheet*" (PCS) in the conduct of the lead-based paint inspection. (See **Appendix B** – XRF Performance Characteristic Sheet)

Prior to beginning the XRF testing, BEC performed the manufacturer's recommended warm up procedures and calibrated the XRF device. BEC performed six calibration check readings using a National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) paint film test strip (NIST SRM #2579), which possesses a lead level of 1.02 mg/cm^2. All measurements were within the range of the calibration check limits; 0.7 to 1.3 mg/cm^2, inclusive. The XRF instrument was deemed in calibration and testing began.

BEC advises, based upon visual inspection and XRF testing activities, a total of **twenty-six** (26) readings were collected from painted surfaces including: walls, ceilings, window components, door components, millwork, baseboards, closet components, and exterior building components. A complete listing of all XRF results is included in **Appendix C** – XRF Testing Data.

Federal & State Regulatory Applicability

Lead-Based Paint: According to the US EPA, US HUD, and MDE lead (Pb^{+2}) environmental pollution/hazard control regulations, an XRF reading of greater than to 0.7 milligram per square centimeter (mg/cm^2) and/or 0.5% Pb^{+2} dry weight of paint film is considered positive for the presence of lead-based paint. These thresholds trigger compliance with legally-enforceable regulations intended to safeguard against unprotected exposure of humans to LBP hazards whom occupy/reside within single-family and multiple-family residential structures as well as child daycare facilities. A partial listing of regulations pertinent to residential and daycare living conditions is provided hereunder.

The United States Occupational Safety and Health Administration (US OSHA) does not define lead paint based on content; paint-containing lead (PCL). Any detectable mass and/or concentration of lead in a paint film categorizes it as lead paint for purposes of complying with US OSHA regulations to determine worker exposure. Refer to "*OSHA Lead in Construction Advisor*", Office of the Assistant Secretary for Policy / Office of Compliance Assistance Policy: https://www.dol.gov/elaws/osha/lead/glossary.asp

Federal Regulations

"*Lead-Based Paint Poisoning Prevention In Certain Residential Structures*"
40 C.F.R. Subpart L, § 745.225 & .226 - worker certification and training requirements
40 C.F.R. Subpart L, §745.227 -work practices standards

"*Renovation, Repair, and Painting (RRP)*"
40 C.F.R §745.80

"*Methods and Standards for Lead-Paint Hazard Evaluation and Hazard Activities*"
24 C.F.R. Part 35, Subpart R

"*Lead in Construction*"
29 C.F.R. §1926.62

"*Lead in General Industry*"
29 C.F.R. §1910.1025

United States Department of Transportation (US DOT)
"*Hazardous Substances*"
49 C.F.R. §171 – 177

Federal Regulations

United States Housing and Urban Development (US HUD)
"*Methods and Standards for Lead-Paint Hazard Evaluation and Hazard Activities*"
24 C.F.R. Part 35, Subpart R

State Regulations

State of Maryland, Department of the Environment (MDE)
"*Procedures for Abating Lead Containing Substances from Buildings*"
COMAR 26.02.07

"*Accreditation and Training for Lead Paint Abatement Services*"
COMAR 26.16.01

"*Hazardous Waste Regulations*"
COMAR 26.13.01

State of Maryland, Division of Labor and Industry, Occupational Safety and Health Program (MOSH)

"*Federal Standards—Incorporation by Reference (adoption of provisions in 29 CFR 1910, 1926 and 1928)*"
COMAR 09.12.31

"*Access to Information About Hazardous and Toxic Substances*"
COMAR 09.12.33

"*MOSH Amendments to US OSHA Lead in Construction Work*"
COMAR 09.12.33

2.3 LBP Testing Combinations

A Testing Combination is characterized by the room equivalent, component, and substrate. The Testing Location is a specific area on a testing combination where the XRF instrument measures for lead-based paint.

A Room Equivalent is an identifiable part of a building, such as a room, exterior sides, or an exterior area. Hallways, stairways, and exterior areas are all examples of room equivalents. Walls are identified as A, B, C and D. The "A" wall in each room corresponds with the wall on which the main entrance or street side of the building is located. The remaining walls are located in order proceeding clockwise from "A" wall. Side A faced the entrance to each apartment building. Windows and/or doors are identified as #1, #2, #3, etc. with the Window #1 and/or Door #1, located at the extreme left-hand side of a room with additional windows and/or doors encountered at the same wall, numbered in ascending order; left to right naming convention.

Each room equivalent is made up of Components. Components may be located inside or outside a building. For example, components in a room are the ceiling, floor, walls, a door and its casing, the window sash, and window casing. The Substrate is the material underneath the paint. Many substrates exist; however US HUD Final Guidelines recommend classifying substrates into one of six substrate types: brick, concrete, drywall, metal, plaster, and wood. These substrate types are intended to include a broad range of materials. If the true substrate is not one of the six types, the substrate that most closely matches the true substrate is selected. For substrates on top of substrates, such as plaster on concrete, the substrate directly beneath the paint surface is used.

2.4 LBP Inspection Limitations

The above inspection was characterized by close visual inspection of subject site, in accordance with US HUD regulations and generally accepted engineering work practices associated with the LBP inspections. It is relevant to note, BEC did NOT conduct exploratory demolition to gain access to enclosed building conditions (e.g., wall cavities, pipe chases, HVAC ductwork shafts, ceiling plenums, etc.).

SECTION 2.0 LEAD-BASED PAINT INSPECTION

2.4 LBP Inspection Limitations (continued)

Accordingly, BEC makes no warranty, expressed or implied that all LBP and/or PCL-finished building components present at the building have been identified. BEC represents the XRF testing to identify LBP and/or PCL-finished building components, have been conducted in accordance with accepted engineering work practices and Federal/State regulations.

SECTION 3.0 LEAD-BASED PAINT TESTING RESULTS

3.1 Lead-Based Paint Films

BEC concludes, based upon review of the LBP inspection findings, "lead based paint" was not detected (via *in situ* XRF testing) as listed in **Table A – Paint Containing Lead Films.**

TABLE A – PAINT CONTAINING LEAD FILMS

Paint Color	Building Component	Location	Substrate	Lead (mg/cm^2)
Green	Window Jamb	Interior Garage	Wood	2.0
White	Coat Hook	Interior Garage	Wood	3.1
White	Window Components	Exterior Garage	Wood	2.0 - >9.9
White	Walls	Exterior Garage	Wood	7.2 - >9.9
White	Door Components	Exterior Garage	Wood	>9.9
Brown	Soffit	Exterior Garage	Wood	4.7 - >9.9
Brown	Shutter	Exterior Garage	Wood	2.2 - >9.9

3.2 Paint Containing Lead Films

BEC concludes, based upon review of the LBP inspection findings, "paint-containing lead" was not detected (via *in situ* XRF testing) as listed in **Table B – Paint Containing Lead Films.**

TABLE B – PAINT CONTAINING LEAD FILMS

Paint Color	Building Component	Location	Substrate	Lead (mg/cm^2)
Blue	Shelf	Interior Garage	Wood	0.3

SECTION 4.0 CONCLUSIONS

4.1 Conclusions

A. BEC concludes, based upon review of the LBP inspection findings, "lead based paint" was detected (via *in situ* XRF testing & paint chip sampling) at the subject site.

B. BEC concludes, based upon review of the LBP inspection findings, "paint containing lead" was detected (via XRF *in situ* testing) at the subject site.

C. BEC advises compliance with US OSHA "*Lead-in-General Industry*" standard (29 CFR 1910.1025) is required for all employers whose employees perform any maintenance activities, which involve making or keeping a structure, fixture, or foundation in proper condition on a routine, scheduled, or in an anticipated fashion, that disturbs "lead-based paint".

D. BEC advises the US OSHA regulation "*Lead Exposure in Construction*" (29 CFR §1926.62) applies to all construction activities, in which employees might be exposed to lead and all related construction activities, currently excluded from the general industry standard for lead (29 CFR §1910.1025).

4.2 Recommendations

A. Additionally, BEC advises, in the State of Maryland, all work, of which an employee may be occupationally exposed to lead - falls within the authority (purview) of US OSHA. It is relevant to note, paint with any measurable lead content may, when subjected to various construction or demolition actions, yield airborne particulate levels that exceed the regulatory Permissible Exposure Level (PEL). OSHA policy explicitly requires compliance with the applicable standard for detectable levels of lead that are below the abatement levels. OSHA policy also recognizes XRF data for establishing a positive determination only. Only those surfaces, which have been determined by an accredited laboratory to be below the detection limit for lead, are exempted from these standards.

B. BEC advises that the building owner is required to communicate (*i.e.*, specify in the contract documents) the presence of "lead-based paint" and/or "paint-containing lead" within the phase limits of the renovation/demolition work area to the general contractor.

C. Contract specifications governing renovation/demolition work, should explicitly require that the general contractor and any subcontractor, engaged in work that may involve contact with existing paint, make an initial exposure assessment and comply with all other pertinent provisions of 29 CFR 1926.62, notwithstanding the low-moderate potential for demolition workers' exposures to airborne lead concentrations, in excess of the legally-enforceable Action Limit (AL, 30 $\mu g/m^3$) and/or Permissible Exposure Limit (PEL, 50 $\mu g/m^3$).

D. BEC recommends conducting representative sampling of the comprehensive demolition waste stream associated with any planned renovation project, to ensure bulk samples of both paint containing lead and all unpainted building components are collected to form one composite sample. Submit the composite bulk sample to a US EPA-accredited laboratory to undergo Toxic Characteristic Leachate Procedure (TCLP) analysis to reveal appropriate disposal requirement; general construction debris versus lead-containing hazardous waste.

WORK PRODUCT DISCLAMER

XRF readings and/or samples collected during an investigation reflect the lead level of that particular area. Readings and samples are collected at random in accordance with established procedures to obtain a representative overview of lead levels within or around a building. Therefore, it should not be construed that every surface, or area in or around a building was sampled or measured for lead content. Testing included exposed and accessible surfaces only, and lead-based paint may be present on securely enclosed or inaccessible surfaces, such as beneath enclosed window wells.

APPENDIX A

PROTEC "LPA-1 RADIOACTIVE ENERGY RESOUCING DATA

PROtec
INSTRUMENT CORPORATION

CERTIFICATION

Dear Customer:

This is to certify that the radioactive source, previously installed in your XRF analyzer, has been removed for decommissioning as part of the resource process of your unit.

The source, Co-57, will be disposed in accordance with all applicable rules and regulations.

Model:	LPA-1___X___ LPA-1B____ LTR1000_____
Unit Serial Number:	_____1677____
Source Model:	_____IPL_____
Source Serial Number:	____P7-363____
Date of Removal:	____31 July 2019_____
Performed by:	_____CH_____

If you have any questions, please do not hesitate to contact us at telephone 617-318-5050 or info@protecinstrument.com.

Sincerely

Radiation Safety Department
Protec Instrument Corporation

Leak Test Certificate

PROtec
INSTRUMENT CORPORATION
38 Edge Hill Road
Waltham, MA 02451

Leak Test Number: 1677-2019

Customer: Boggs Environmental Consultant

System:	LPA-1	**Instrument Serial Number:**	1677
Source Manufacturer:	Isotope Products	**Source Model:**	A3901-2
Active Material:	Co57	**Source Activity:**	444MBq (12mCi)
Source Serial Number:	R9-009	**Assay Date**	12 Aug 19
Source Enclosure:	Stainless Steel in Tungsten Holder		

Description of Area Wiped: **Front and Sides of Bezel**

Comments

Leak Test Results: <0.005 µCi

Chinh Huynh
Individual Performing Test (please print)

Signature of Individual Performing Test

12 August 2019
Date

APPENDIX B

XRF PERFORMANCE CHARACTERISTIC SHEET

Performance Characteristic Sheet

EFFECTIVE DATE: **October 25, 2006** **EDITION NO.: 5**

MANUFACTURER AND MODEL:

Make: ***Radiation Monitoring Devices***
Model: ***LPA-1***
Source: ^{57}Co
Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above ***for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Quick mode or 30-second equivalent standard (Time Corrected) mode readings.

XRF CALIBRATION CHECK LIMITS:

0.7 to 1.3 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm^2, substrate correction is recommended for:

Metal using 30-second equivalent standard (Time Corrected) mode readings.
None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second equivalent standard (Time Corrected) mode readings
Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

THRESHOLDS:

30-SECOND EQUIVALENT STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results corrected for substrate bias on metal substrate only	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

QUICK MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Readings not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.02 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> $$\text{Correction value} = (1^{st} + 2^{nd} + 3^{rd} + 4^{th} + 5^{th} + 6^{th}\ \textit{Reading}) / 6 - 1.02\ \text{mg/cm}^2$$
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use either the Quick Mode or 30-second equivalent standard (Time Corrected) Mode readings.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

BIAS AND PRECISION:

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm^2 lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm^2 lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm^2 and none of the quick mode readings were less than 1.0 mg/cm^2. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm^2)	PRECISION* (mg/cm^2)
0.0 mg/cm^2	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm^2	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm^2	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm^2	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

*Precision at 1 standard deviation.

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristics Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

DOCUMENTATION:

An EPA document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, www.hud.gov/offices/lead.

This XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

Limit of Detection (LOD)

Statistically, LOD = 3 STD (Standard Deviation) or as it is called 3Sigma. You have to be careful about LOD detection calculations. It is the calculation of Sigma (STD) that is a bit tricky. The Sigma (STD.) is not a constant; it depends on time, %Pb, substrate, etc.

One can, as some XRF manufacturers do, base the calculation of the STD on counting statistics. Scientifically, the STD calculation for XRF application should not be based solely on statistical counting or precision calculations (Random error) due to the fact that one can achieve excellent precision by measuring for a long time. So, in this model, the square root of the longest measurement time count rate is used to represent the Sigma. Numbers as low as 0.05 mg/cm^2 can be achieved by most XRF systems including the LPA-1 analyzer.

The true measurement of LOD should also include the Systematic errors into the calculation of STD. The most dominating factor into the Systematic error contributor is the NIST Standard.

No one can measure better than what the calibration standards represent. The uncertainty of the NIST 1.04 sample is ± 0.064 mg/cm2. This means the STD for this sample is 0.032. Therefore, the contribution from this sample's error alone to LOD is 3 X (.032) = 0.096 or almost 0.1 mg/cm^2.

We suggest that you also read the "Methodology for XRF Performance Characteristic Sheet", EPA 747-R-95-008 that details how the HUD/EPA attempted these calculations. You can get a copy by calling 800-424-LEAD.

We hope this note is helpful to you.

RMD Instruments, LLC

Operation of the LPA-1 analyzer and its operational statistics
Zero measurements and negative values

XRF analysis, like all other methods of measurements, is influenced by both random and systematic errors. The random errors are those that their magnitude can be reduced but not eliminated such as the effect of the radioactive decay of the source in measurements. The systematic errors are those that can be avoided, or at least corrected for. For example the effect of calibration samples, electronics, substrate, and mathematical algorithms.

The statistical terms such as precision, bias, accuracy, and uncertainty refer to these errors and are mathematical approaches for defining and measuring the contribution of each parameter. The uncertainty of a measurement is the summation of the contribution of precision, accuracy, and bias for that measurement.

The scatter on a single substrate represents random errors. We define this to be the *precision*. Strictly speaking, precision is the standard deviation of this scatter. The error in the mean value of lead, for a single substrate, represents a systematic error. Some would refer to this as the bias for this particular substrate, i.e., a particular piece of wood. We use the word *bias* to refer to the average of systematic errors for substrates class not only a particular component in that class.

The scatter in the systematic errors (strictly speaking, the standard deviation in the errors in the mean) we call *accuracy*. For any single reading obtained by the LPA-1, there will be some uncertainty which results from the counts used in this reading (i.e., the precision) and the systematic error in our algorithm (which is quantified by the accuracy). Because these two factors are statistically independent, the total uncertainty is given by the square of the sum of the squares of precision and accuracy.

The contribution of random and systematic errors in an analysis is best represented by a statistical distribution curve. A series of replicate measurements results in a statistical distribution curve represented by Gaussian or Normal distribution. The curve is characterized by number of measurements, range or spread, mean, and scatter or divergence. The standard deviation (sigma) for such a curve is calculated to be the square root of the variance. In practice it can be stated that the probability is 68.3% (1 sigma or 1 standard deviation) that any individual measurement will have a value between the average of all readings plus and minus the standard deviation. For 2sigma or 2 standard deviation the probability is 95.4%.

From the above explanation, one can conclude that a set of repeated measurements for a zero lead sample would result in a Guassian distribution curve with mean value of zero. This curve implies that for a perfect zero sample fifty out of one hundred measurements would be to the negative side of the curve as the other fifty would lay on the positive side. Therefore, depending on the standard deviation and degree of confidence a zero lead sample can have measured values ranging from negative to positive numbers.

Therefore, the existence of negative values should be expected and interpolated as zero lead content due to statistical nature of the XRF measurements. The lack of such negative values suggests that data have been manipulated and should be questioned.

Both the HUD and the EPA recognize the statistical nature of the analytical measurements and the possibility of obtaining negative values where the lead content is around zero. In practice, the interpretation of a negative number has been as a reading that is below the regulatory Action Level threshold and as a result is negative lead.

APPENDIX C

XRF TESTING DATA

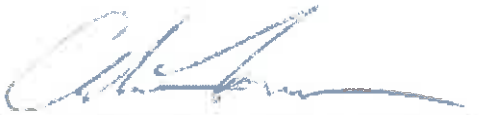
PROtec
INSTRUMENT CORPORATION

THE PROTEC LPA-1 XRF LEAD PAINT SPECTRUM ANALYZER

LEAD PAINT INSPECTION REPORT

REPORT NUMBER:	**S#01677 - 09/05/19 – 10:10**
INSPECTION FOR:	**BANKS DEVELOPMENT** **Attn: Bill Cole** 4811 St Elmo Avenue Bethesda, Maryland 20814
ABATEMENT LEVEL:	**0.8**
TOTAL READINGS:	**38**
JOB STARTED:	**09/05/19 10:08**
JOB FINISHED:	**09/05/19 10:43**
PERFORMED AT:	5904 Cedar Parkway, Chevy Chase, Maryland 20815
INSPECTION DATE:	**05 September 2019**
INSTRUMENT TYPE:	**PROTEC** **MODEL LPA-1** **XRF TYPE ANALYZER** **Serial Number: #01677**
OPERATOR LICENSE:	**Andrew L. Hanson**

State of Maryland Lead Risk Assessor (#17343) Exp: 03/07/2021

SIGNED:  **DATE:** 17 September, 2019

Andrew Hanson, Project Manager

PROtec INSTRUMENT CORPORATION

THE PROTEC LPA-1 XRF LEAD PAINT SPECTRUM ANALYZER

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: 5904 Cedar Parkway, Chevy Chase, Maryland 20815

Inspection Date: 09/05/19
Report Date: 9/17/2019
Abatement Level: 0.8
Report No. S#01677 - 09/05/19 10:08
Total Readings: 38
Job Started: 09/05/19 10:08
Job Finished: 09/05/19 10:43

Read No.	Rm	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm²)	Mode
1		CALIBRATION								0.9	TC
2		CALIBRATION								0.9	TC
3		CALIBRATION								0.9	TC
4		CALIBRATION								-0.1	TC
5		CALIBRATION								-0.2	TC
6		CALIBRATION								-0.1	TC
7	001	Garage	B	Shelf	Ctr		I	Wood	White	0.0	QM
8	001	Garage	C	Cabinet	Ctr		I	Wood	Red	0.0	QM
9	001	Garage	C	Cabinet	Ctr		I	Wood	White	-0.1	QM
10	001	Garage	C	Shelf	Ctr		I	Wood	Blue	0.3	QM
11	001	Garage	C	Coat Hook	Ctr		I	Wood	White	3.1	QM
12	001	Garage	C	Window	Ctr	Rgt jamb	I	Wood	Green	2.0	QM
13	001	Garage	A	Wall	U Ctr		F	Wood	White	>9.9	QM
14	001	Garage	A	Door	Ctr	U Ctr	F	Wood	White	>9.9	QM
15	001	Garage	A	Door	Ctr	Rgt casing	F	Wood	White	>9.9	QM
16	001	Garage	A	Soffit			F	Wood	Brown	>9.9	QM
17	001	Garage	B	Wall	U Ctr		F	Wood	White	>9.9	QM
18	001	Garage	B	Window	Ctr	Sill	F	Wood	White	>9.9	QM
19	001	Garage	B	Window	Ctr	Sash	F	Wood	White	>9.9	QM
20	001	Garage	B	Window	Ctr	Rgt casing	F	Wood	White	>9.9	QM
21	001	Garage	B	Shutter	Ctr		F	Wood	White	>9.9	QM
22	001	Garage	B	Soffit			F	Wood	Brown	>9.9	QM
23	001	Garage	C	Wall	U Ctr		F	Wood	White	7.2	QM
24	001	Garage	C	Window	Ctr	Sill	F	Wood	White	2.0	QM
25	001	Garage	C	Window	Ctr	Sash	F	Wood	White	>9.9	QM
26	001	Garage	C	Window	Ctr	Rgt casing	F	Wood	White	3.5	QM
27	001	Garage	C	Shutter	Ctr		F	Wood	Brown	2.2	QM
28	001	Garage	C	Soffit			F	Wood	Brown	4.7	QM
29	001	Garage	D	Wall	U Ctr		F	Wood	White	>9.9	QM
30	001	Garage	D	Soffit			F	Wood	Brown	>9.9	QM
31	001	Garage	D	Window	Ctr	Sill	F	Wood	White	>9.9	QM
32	001	Garage	D	Window	Ctr	Sash	F	Wood	White	>9.9	QM
33		CALIBRATION								0.9	TC
34		CALIBRATION								0.9	TC
35		CALIBRATION								0.9	TC
36		CALIBRATION								-0.1	TC
37		CALIBRATION								-0.1	TC
38		CALIBRATION								-0.2	TC

---- End of Readings ----

THE PROTEC LPA-1 XRF LEAD PAINT SPECTRUM ANALYZER

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: 5904 Cedar Parkway, Chevy Chase, Maryland 20815

Inspection Date: 09/05/19
Report Date: 9/17/2019
Abatement Level: 0.8
Report No. S#01677 - 09/05/19 10:08
Total Readings: 38 Actionable: 22
Job Started: 09/05/19 10:08
Job Finished: 09/05/19 10:43

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm²)	Mode
Exterior Room 001 Garage									
013	A	Wall	U Ctr		F	Wood	White	>9.9	QM
016	A	Soffit			F	Wood	Brown	>9.9	QM
015	A	Door	Ctr	Rgt casing	F	Wood	White	>9.9	QM
014	A	Door	Ctr	U Ctr	F	Wood	White	>9.9	QM
017	B	Wall	U Ctr		F	Wood	White	>9.9	QM
022	B	Soffit			F	Wood	Brown	>9.9	QM
020	B	Window	Ctr	Rgt casing	F	Wood	White	>9.9	QM
019	B	Window	Ctr	Sash	F	Wood	White	>9.9	QM
018	B	Window	Ctr	Sill	F	Wood	White	>9.9	QM
021	B	Shutter	Ctr		F	Wood	White	>9.9	QM
023	C	Wall	U Ctr		F	Wood	White	7.2	QM
028	C	Soffit			F	Wood	Brown	4.7	QM
026	C	Window	Ctr	Rgt casing	F	Wood	White	3.5	QM
025	C	Window	Ctr	Sash	F	Wood	White	>9.9	QM
024	C	Window	Ctr	Sill	F	Wood	White	2.0	QM
027	C	Shutter	Ctr		F	Wood	Brown	2.2	QM
029	D	Wall	U Ctr		F	Wood	White	>9.9	QM
030	D	Soffit			F	Wood	Brown	>9.9	QM
032	D	Window	Ctr	Sash	F	Wood	White	>9.9	QM
031	D	Window	Ctr	Sill	F	Wood	White	>9.9	QM
Interior Room 001 Garage									
012	C	Window	Ctr	Rgt jamb	I	Wood	Green	2.0	QM
011	C	Coat Hook	Ctr		I	Wood	White	3.1	QM
Calibration Readings									

---- End of Readings ----

THE PROTEC LPA-1 XRF LEAD PAINT SPECTRUM ANALYZER

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: 5904 Cedar Parkway, Chevy Chase, Maryland 20815

Inspection Date: 09/05/19
Report Date: 9/17/2019
Abatement Level: 0.8
Report No. S#01677 - 09/05/19 10:08
Total Readings: 38
Job Started: 09/05/19 10:08
Job Finished: 09/05/19 10:43

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm²)	Mode
Exterior Room 001 Garage									
013	A	Wall	U Ctr		F	Wood	White	>9.9	QM
016	A	Soffit			F	Wood	Brown	>9.9	QM
015	A	Door	Ctr	Rgt casing	F	Wood	White	>9.9	QM
014	A	Door	Ctr	U Ctr	F	Wood	White	>9.9	QM
017	B	Wall	U Ctr		F	Wood	White	>9.9	QM
022	B	Soffit			F	Wood	Brown	>9.9	QM
020	B	Window	Ctr	Rgt casing	F	Wood	White	>9.9	QM
019	B	Window	Ctr	Sash	F	Wood	White	>9.9	QM
018	B	Window	Ctr	Sill	F	Wood	White	>9.9	QM
021	B	Shutter	Ctr		F	Wood	White	>9.9	QM
023	C	Wall	U Ctr		F	Wood	White	7.2	QM
028	C	Soffit			F	Wood	Brown	4.7	QM
026	C	Window	Ctr	Rgt casing	F	Wood	White	3.5	QM
025	C	Window	Ctr	Sash	F	Wood	White	>9.9	QM
024	C	Window	Ctr	Sill	F	Wood	White	2.0	QM
027	C	Shutter	Ctr		F	Wood	Brown	2.2	QM
029	D	Wall	U Ctr		F	Wood	White	>9.9	QM
030	D	Soffit			F	Wood	Brown	>9.9	QM
032	D	Window	Ctr	Sash	F	Wood	White	>9.9	QM
031	D	Window	Ctr	Sill	F	Wood	White	>9.9	QM
Interior Room 001 Garage									
007	B	Shelf	Ctr		I	Wood	White	0.0	QM
012	C	Window	Ctr	Rgt jamb	I	Wood	Green	2.0	QM
008	C	Cabinet	Ctr		I	Wood	Red	0.0	QM
009	C	Cabinet	Ctr		I	Wood	White	-0.1	QM
010	C	Shelf	Ctr		I	Wood	Blue	0.3	QM
011	C	Coat Hook	Ctr		I	Wood	White	3.1	QM
Calibration Readings									
001								0.9	TC
002								0.9	TC
003								0.9	TC
004								-0.1	TC
005								-0.2	TC
006								-0.1	TC
033								0.9	TC
034								0.9	TC
035								0.9	TC
036								-0.1	TC
037								-0.1	TC
038								-0.2	TC

---- End of Readings ----

THE PROTEC LPA-1 XRF LEAD PAINT SPECTRUM ANALYZER

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: 5904 Cedar Parkway, Chevy Chase, Maryland 20815

Inspection Date: 09/05/19
Report Date: 9/17/2019
Abatement Level: 0.8
Report No. S#01677 - 09/05/19 10:08
Total Reading Sets: 26
Job Started: 09/05/19 10:08
Job Finished: 09/05/19 10:43

Structure	Total	Structure Distribution Positive	Negative	Inconclusive
Cabinet	2	0 <0%>	2 <100%>	0 <0%>
Coat Hook	1	1 <100%>	0 <0%>	0 <0%>
Door Rgt casing	1	1 <100%>	0 <0%>	0 <0%>
Door U Ctr	1	1 <100%>	0 <0%>	0 <0%>
Shelf	2	0 <0%>	2 <100%>	0 <0%>
Shutter	2	2 <100%>	0 <0%>	0 <0%>
Soffit	4	4 <100%>	0 <0%>	0 <0%>
Wall	4	4 <100%>	0 <0%>	0 <0%>
Window Rgt casing	2	2 <100%>	0 <0%>	0 <0%>
Window Rgt jamb	1	1 <100%>	0 <0%>	0 <0%>
Window Sash	3	3 <100%>	0 <0%>	0 <0%>
Window Sill	3	3 <100%>	0 <0%>	0 <0%>
Inspection Totals:	26	22 < 85%>	4 < 15%>	0 < 0%>

APPENDIX D

BEC STAFF QUALIFICATIONS

THIS IS TO CERTIFY THAT

Andrew Lawrence Hanson

HAS MET THE LEAD PAINT SERVICES ACCREDITATION REQUIREMENTS FOR

Risk Assessor

EXPIRATION DATE 03 07 2021

TRAINING PROVIDER Aerosol Monitoring & Analysis, Inc.

COURSE DATE 03 23 2017

ADMINISTRATOR, LEAD PAINT ACCREDITATION
MARYLAND DEPARTMENT OF THE ENVIRONMENT

3/15/19
DATE

STATE OF MARYLAND

Certificate # 17343

Application for reaccreditation shall be submitted to MDE 60 days prior to accreditation expiration indicated on this certificate.

APPENDIX E

BEC FIELD DOCUMENTATION

BEC

Boggs Environmental Consultants, Inc.

XRF Worksheet

Address: 5904 Cedar Pkwy, Chevy Chase, MD Date: 9-5-19

Project #: MD19185 XRF Serial # 1677 Inspector/Risk Assessor: Adam Hamm

Shot	Reading	Room	Side	Component	Substrate	Location	Color	Condition	Quality	Comments
1		Calibrate	A B C D		B C M P S W O	L C R Up Lo		I F P	0.9	
2			A B C D		B C M P S W O	L C R Up Lo		I F P	0.9	
3			A B C D		B C M P S W O	L C R Up Lo		I F P	0.9	
4			A B C D		B C M P S W O	L C R Up Lo		I F P	0.1	
5			A B C D		B C M P S W O	L C R Up Lo		I F P	-0.2	
6			A B C D		B C M P S W O	L C R Up Lo		I F P	-0.1	
7	1	Garage	A B C D	Shelf	B C M P S W O	L C R Up Lo	White	I F P	-0.0	
8			A B C D		B C M P S W O	L C R Up Lo		I F P	-0.0	
9			A B C D		B C M P S W O	L C R Up Lo	White	I F P	-0.1	
10			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
11			A B C D	Coat Hook	B C M P S W O	L C R Up Lo	White	I F P	3.1	
12			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
13	Ext 1	Garage Ext	A B C D	Wall	B C M P S W O	L C R Up Lo	White	I F P	>9.9	
14			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
15			A B C D	Casing	B C M P S W O	L C R Up Lo		I F P	>9.9	
16			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
17			A B C D	Wall	B C M P S W O	L C R Up Lo	White	I F P	>9.9	
18			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
19			A B C D	Sash	B C M P S W O	L C R Up Lo		I F P	>9.9	
20			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
21			A B C D	Shutter	B C M P S W O	L C R Up Lo		I F P	>9.9	
22			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
23			A B C D	Wall	B C M P S W O	L C R Up Lo	White	I F P	7.2	
24			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	
25			A B C D	Sash	B C M P S W O	L C R Up Lo		I F P	>9.9	
26			A B C D		B C M P S W O	L C R Up Lo		I F P	0.0	

Substrates – B-Brick, C-Concrete, M-Metal, Plaster, Sheetrock, Wood
Location - R-Right, L-Left, C-Center, Up-Upper, Lo-Lower
Condition – I-Intact, F-Fair, P-Poor

BEC

Boggs Environmental Consultants, Inc.

Shot #	Room	Room	Side	Condition	Substrate	Location	Color	Condition	Quantity	Comments
27	East	George Bar	A B (C) D	Shutter	B C M P S (W) O	L (C) R Up Lo	Brown	I (F) P	2.2	
28			A B C D		B C M P S W O	L C R Up Lo		I F P		
29			A B C (D)	Wall	B C M P S (W) O	L (C) R Up Lo	White	I (F) P	29.9	
30			A B C D		B C M P S W O	L C R Up Lo		I F P		
31			A B C (D)	Via Sill	B C M P S (W) O	L (C) R Up Lo	White	I (F) P	29.9	
32			A B C D		B C M P S W O	L C R Up Lo		I F P		
33		Calibrate	A B C D		B C M P S W O	L C R Up Lo		I F P	0.9	
34			A B C D		B C M P S W O	L C R Up Lo		I F P		
35			A B C D		B C M P S W O	L C R Up Lo		I F P	0.9	
36			A B C D		B C M P S W O	L C R Up Lo		I F P		
37			A B C D		B C M P S W O	L C R Up Lo		I F P	-0.1	
38			A B C D		B C M P S W O	L C R Up Lo		I F P		
39			A B C D		B C M P S W O	L C R Up Lo		I F P		
40			A B C D		B C M P S W O	L C R Up Lo		I F P		
41			A B C D		B C M P S W O	L C R Up Lo		I F P		
42			A B C D		B C M P S W O	L C R Up Lo		I F P		
43			A B C D		B C M P S W O	L C R Up Lo		I F P		
44			A B C D		B C M P S W O	L C R Up Lo		I F P		
45			A B C D		B C M P S W O	L C R Up Lo		I F P		
46			A B C D		B C M P S W O	L C R Up Lo		I F P		
47			A B C D		B C M P S W O	L C R Up Lo		I F P		
48			A B C D		B C M P S W O	L C R Up Lo		I F P		
49			A B C D		B C M P S W O	L C R Up Lo		I F P		
50			A B C D		B C M P S W O	L C R Up Lo		I F P		
51			A B C D		B C M P S W O	L C R Up Lo		I F P		
52			A B C D		B C M P S W O	L C R Up Lo		I F P		
53			A B C D		B C M P S W O	L C R Up Lo		I F P		
54			A B C D		B C M P S W O	L C R Up Lo		I F P		
55			A B C D		B C M P S W O	L C R Up Lo		I F P		
56			A B C D		B C M P S W O	L C R Up Lo		I F P		
57			A B C D		B C M P S W O	L C R Up Lo		I F P		

Substrates – B-Brick, C-Concrete, M-Metal, Plaster, Sheetrock, Wood
Location - R-Right, L-Left, C-Center, Up-Upper, Lo-Lower
Condition – I-Intact, F-Fair, P-Poor

BEC

Boggs Environmental Consultants, Inc.

Date: 9-5-19

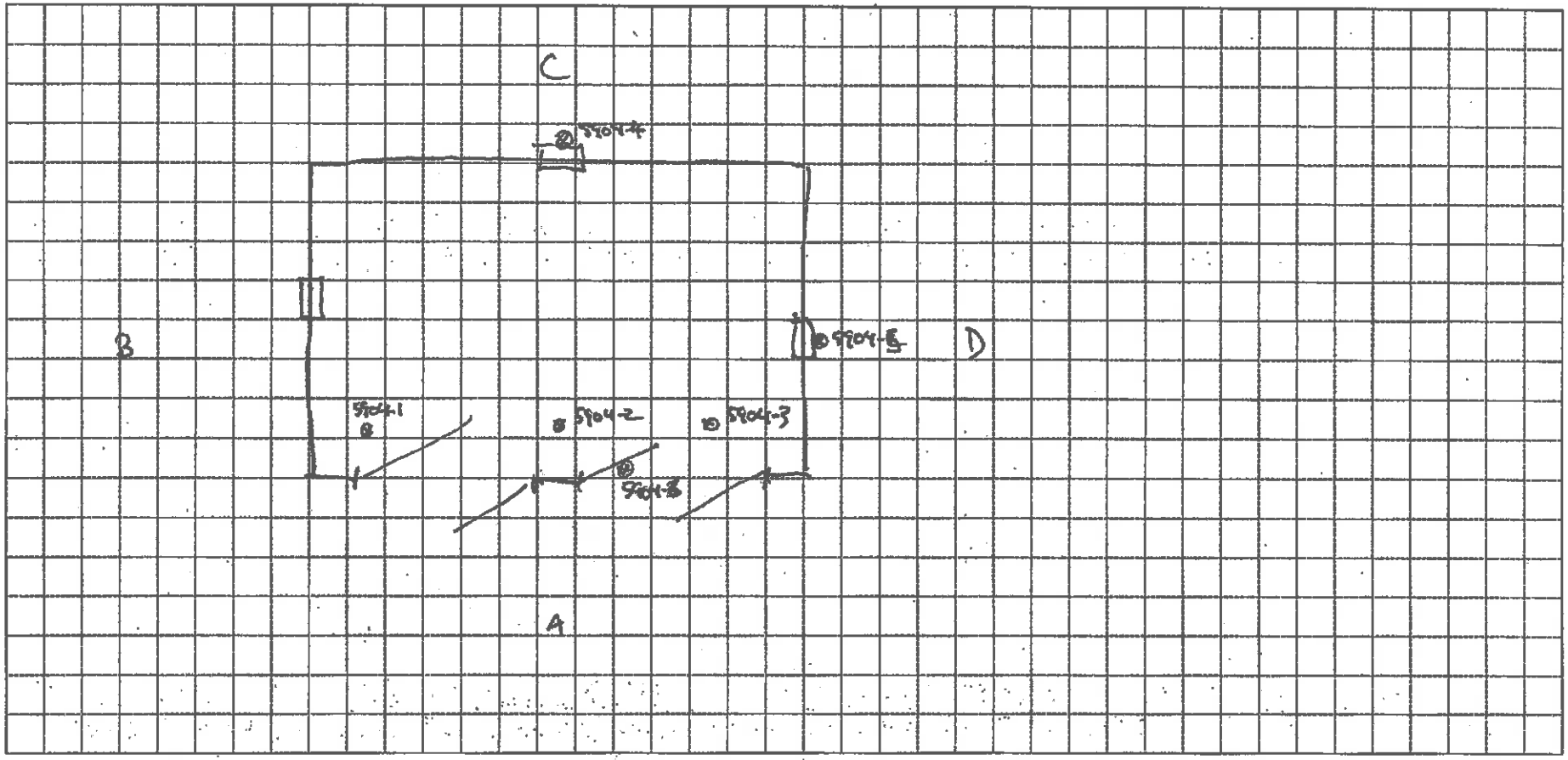
BEC Onsite IH: Andrew Hansen

BEC Project No: MD19185

Project Location: 5904 Cedar Pkwy Chevy Chase, MD

Project Manager: RR

SUBJECT SITE/ WORK AREA SKETCH



APPENDIX F

BEC PHOTOSHEET

Garage Structure at 5904 Cedar Parkway, Chevy Chase, Maryland 20815

White Interior Garage Coat Hook

Exterior Wall, Shutter, Window, & Soffit

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report prepared for Boggs Environmental Consultants, Inc

Report Date: 9/13/2019

Project Name: Banks Development 5904 Cedar Pkwy

Project #: MD19185

SanAir ID#: 19045599

NVLAP TESTING

NVLAP LAB CODE 200870-0

1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com

SanAir Technologies Laboratory

SanAir ID Number
19045599
FINAL REPORT
9/13/2019 3:38:25 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: MD19185
P.O. Number:
Project Name: Banks Development 5904 Cedar Pkwy
Collected Date: 9/5/2019
Received Date: 9/6/2019 10:15:00 AM

Dear Andrew Hanson,

We at SanAir would like to thank you for the work you recently submitted. The 6 sample(s) were received on Friday, September 06, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): 5904-1, 5904-2, 5904-3, 5904-4, 5904-5, 5904-6.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 6 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
19045599
FINAL REPORT
9/13/2019 3:38:25 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: MD19185
P.O. Number:
Project Name: Banks Development 5904 Cedar Pkwy
Collected Date: 9/5/2019
Received Date: 9/6/2019 10:15:00 AM

Analyst: Powers, Griffin

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
5904-1 / 19045599-001 Asphalt Roof Shingles & Tar Paper, Shingle	Black Non-Fibrous Heterogeneous	20% Glass	80% Other	None Detected
5904-1 / 19045599-001 Asphalt Roof Shingles & Tar Paper, Tar Paper	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
5904-2 / 19045599-002 Asphalt Roof Shingles & Tar Paper, Shingle	Black Non-Fibrous Heterogeneous	20% Glass	80% Other	None Detected
5904-2 / 19045599-002 Asphalt Roof Shingles & Tar Paper, Tar Paper	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
5904-3 / 19045599-003 Asphalt Roof Shingles & Tar Paper, Shingle	Black Non-Fibrous Heterogeneous	20% Glass	80% Other	None Detected
5904-3 / 19045599-003 Asphalt Roof Shingles & Tar Paper, Tar Paper	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
5904-4 / 19045599-004 Window Glazing Compound	Tan Non-Fibrous Homogeneous		100% Other	None Detected
5904-5 / 19045599-005 Window Glazing Compound	Tan Non-Fibrous Homogeneous		100% Other	None Detected
5904-6 / 19045599-006 Window Glazing Compound	White Non-Fibrous Homogeneous		98% Other	2% Chrysotile

Analyst: [signature]
Analysis Date: 9/13/2019

Approved Signatory: [signature]
Date: 9/13/2019

Disclaimer

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Samples are held for a period of 60 days.

For NY state samples, method EPA 600/M4-82-020 is performed.

Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Certifications
NVLAP lab code 200870
City of Philadelphia: ALL-460
PA Department of Environmental Protection Number: 68-05397
California License Number: 2915
Colorado License Number: AL-23143
Connecticut License Number: PH-0105
Massachusetts License Number: AA000222
Maine License Number: LB-0075
New York ELAP lab ID: 11983
Rhode Island License Number: AAL-126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia 3333000323
Washington State License Number: C989
West Virginia License Number: LT000566
Vermont License: AL166318

Revision Date: 11/30/2017

SanAir Technologies Laboratory, Inc.
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804.897.1177 / 888.895.1177 / Fax 804.897.0070
www.sanair.com

Asbestos Chain of Custody

SanAir ID Number: 19045599

Company: Boggs Environmental Consultants	Project #: MD19185	Phone #: 301-694-5687
Address: 200 W. Main Street	Project Name: Banks Development 6904 Cedar Pkwy	Phone #:
City, St., Zip: Middletown, MD 21769	Date Collected: 9-5-2019	Fax #: 301-694-9799
Samples Collected By: Andy Hanson	P.O. Number:	Email: dconway@boggsenvironmental.com

Asbestos Analysis Types

Bulk			Air			Soil/Vermiculite		
ABB	PLM EPA 600/R-93/116	☑	ABA	PCM NIOSH 7400	☐	ABSE	PLM EPA 600/R-93/116 (Qual.)	☐
	Positive Stop ☐		ABA-2	OSHA w/ TWA*	☐	ABSP	PLM CARB 435 (LOD <1%)	☐
ABEPA	PLM EPA 400 Point Count	☐	ABTEM	TEM AHERA	☐	ABSP1	PLM CARB 435 (LOD 0.25%)	☐
ABB1K	PLM EPA 1000 Point Count	☐	ABATN	TEM NIOSH 7402	☐	ABSP2	PLM CARB 435 (LOD 0.1%)	☐
ABBEN	PLM EPA NOB	☐	ABT2	TEM Level II	☐			
ABBCH	TEM Chatfield	☐						
ABBTM	TEM EPA NOB	☐	Water			Dust		
ABBNY	TEM NY ELAP 198.4	☐	ABHE	EPA 100.2	☐	ABWA	TEM Wipe ASTM D-6480	☐
OTHER/ Matrix :		☐				ABDMV	TEM Microvac ASTM D-5755	☐

Turn Around Times				
	☐ 3 HR (4 HR TEM)	☐ 6 HR (8HR TEM)	☐ 12 HR	☐ 24 HR
	2 Days ☐	3 Days ☐	4 Days ☐	5 Days ☑

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start – Stop	
	Please See BEC Sample Log					

Special Instructions	

Relinquished by	Date	Time	Received by	Date	Time
Andy Hanson	9-5-2019	1700	CLC	9-10-19	10:15am

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning.
Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time.
Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a $10 shipping fee.

BOGGS
ENVIRONMENTAL CONSULTANTS

19045593

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Project #: MD19185 Inspector: ALH Date: 9-5-19

Project Name: Banks Development

Project Address: 5904 Cedar Pkwy, Chevy Chase, MD Page: 1 of 1

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (SF/LF/YD³)	Friable/Nonfriable: Check F	Friable/Nonfriable: Check NF
5904-1	1	Garage Roof	Black asphalt roof shingles & tar paper	~1,800sf		X
2	1	"	"	"		X
3	1	"	"	"		X
4	2	Garage Exterior	Window Glazing Compound	8 windows		X
5	2	"	"	"		X
6	2	"	"	"		X

ALH 09-6-19 10:15am

MR BUGS, Inc
P.O. Box 343
Cabin John, MD 20818
301-229-7200 Mikemrbugs@gmail.com
MDA License Number 25991

August 27 2019

Department of Permitting Services
255 Rockville Pike
Rockville, MD 20850

Attention Division of Casework Management

RE: 5904 Cedar Parkway House & Detached Garage

Chevy Chase Maryland 20815

MR Bugs, Inc. is licensed with the Maryland Department of Agriculture in the category of "Industrial, Institutional, Structural & Related - Rodent". You will find our company listed with the following information:

Business Name: MR Bugs, Inc.
Business License Number: 25991
Expiration Date; June 30, 2020

MR Bugs, Inc. has inspected 5904 Cedar Parkway on

8-27-19 and finds it is free of any rodents or other pests.

Michael Roark

Michael Roark
Owner/Operator
MR Bugs, Inc.

Online Form Submittal: Website Posting Notice for Appeal, Special Permit and Variance Hearing

noreply@civicplus.com
Mon 11/18/2019 09:50 AM

To: Village, Chevy Chase <ChevyChase.Village@montgomerycountymd.gov>; CCV Permitting <ccvpermitting@montgomerycountymd.gov>

[EXTERNAL EMAIL]

Website Posting Notice for Appeal, Special Permit and Variance Hearing

Case Number:	*Field not completed.*
Hearing Date:	12/4/2019

(Section Break)

By signing below, I acknowledge as the applicant/appellant in the above-referenced case number that all supporting information and documentation for my case will be posted on the Village's website at for review by the general public.

Applicant/Appellant Name	Laura Billings and David O'Neil
Phone Number:	917-359-0949
Address:	5904 Cedar Parkway
Email Address:	laura_m_billings@yahoo.com; dave0505@gmail.com
Applicant/Appellant Signature:	Laura Billings

(Section Break)

Agent Name for applicant/appellant:	Phillip Long
Phone Number:	301-703-2340
Address	10 S Bentz Street
Email Address:	phil@cas-dc.com
Signature of agent:	Phillip Long

(Section Break)